INCH-POUND
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SUPERSEDING
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16 January, 2004

COMMERCIAL ITEM DESCRIPTION

CAP, SYNTHETIC MICROFLEECE

The General Services Administration has authorized the use of this commercial item description, for all federal agencies.

1. SCOPE. This commercial item description covers the requirements for a synthetic microfleece cap that provides the necessary military appearance and functionality required by the Services. The material and design provide the environmental protection, low bulk, lightweight, durability and user comfort needed for wear in field and combat operations other than war. The cap is compatible with the military helmet and Extended Cold Weather Clothing System (ECWCS) parka hood.

2. CLASSIFICATION. The cap will be available in the following classes and sizes:

Classes:

Class 1	-	Black
Class 2	-	Coyote
Class 3	-	Foliage Green 504

Sizes:

Small/Medium or One Size Fits All
Large/X-Large

3. SALIENT CHARACTERISTICS. The microfleece cap is a single ply construction in a bell shape, pull-on style with a crown shaped of four equal sections joined together by darts of equal length and with a 4 $\pm$ 1/8 inch wide hem that can be cuffed or worn down (see Figures 1 and 2).

3.1 Basic material. The basic material for the cap shall be a 100% no pill polyester circular knit terry with comfort stretch, double-sided, low micro velour (fleece) with moisture management properties (see 7.3). The color of the fabric shall be Black for Class 1, Coyote for Class 2 and

Comments, suggestions, or questions on this document should be addressed to: Defense Supply Center Philadelphia, Clothing and Textiles Directorate, Attn: DSCP Standardization Team, 700 Robbins Avenue, Philadelphia, and PA 19111-5096. Since contact information can change, you may want to verify the currency of the address information using Acquisition Streamlining and Standardization Information System (ASSIST) online database http://assist.daps.dla.mil/.

Foliage Green 504 for Class 3. The material shall conform to the physical requirements specified in Table I.

TABLE I. Material physical requirements

Characteristics	Requirement	Test Method
Fiber Content	100% polyester	AATCC 20 or ASTM D 276
Yarn Denier (Ave, Pile)	1.3 dpf	ASTM D 1907
Construction	circular double sided velour terry knit	
Weight, oz./sq. yd	5.7 ± 0.6	ASTM D 3776
Thickness @ 0.6 psi (min)	0.070	ASTM D 1777
Air Permeability, cu ft/min/sq ft (min)	175	ASTM D 737
Colorfastness to: (minimum)		
Laundering (3 cycles)	3-4	AATCC 61- 2A, 1/, 2/
Crocking		
Wet	3.0	AATCC 8 3/
Dry	4.0	AATCC 8 3/
Light (40 hrs or 170 KJ)	3-4	AATCC 16 OPT 1 or 3
Dimensional Stability - % (3 cycles) max.	Wales: 4.5 Courses: 4.5	AATCC 135, III, A and the following parameters 4/
Water sorption – Back side	See 3.1.3	See 3.1.3
Wicking - Face Side	See 3.1.3	See 3.1.3

1/ AATCC Evaluation Procedure 1, Gray Scale for Color Change
2/ AATCC Evaluation Procedure 2, Gray Scale for Staining.
3/ AATCC Evaluation Procedure 8, AATCC9-Step Chromatic Transference Scale
4/ Sample dimensions: 22 x 22 inches. AATCC 135 Table I 3, iii, Aiii. Use 18-inch marks to determine dimensional stability.

3.1.1 Visual Shade. The color and appearance of the material shall match the standard sample when viewed using the AATCC Evaluation Procedure 9, Option A, with sources simulating artificial daylight D75 illuminant with a color temperature of 7500 ± 200 K illumination of 100 ± 20 foot candles, and shall be a good match to the standard sample under incandescent lamplight at 2856 ± 200K

3.1.2 Thread. Thread for needle and bobbin (looper) shall be commercial 100% textured, 2 or 3 ply, polyester thread, approximate Tex size 35, conforming to A-A-52095; or 2 or 3 ply cotton or polyester covered polyester core thread, approximate Tex size 35, conforming to A-A-50199. The thread color shall be Black for Class 1, Coyote for Class 2 and Foliage Green 504 for Class 3.

3.1.3 Water sorption and Wicking Test. Fabric specimens shall be conditioned in accordance with ASTM D 1776 and tested in that environment. The specimen size shall be 6-inches by 6-inches; three (3) separate specimens shall be used for each of the face side and back side tests. A fabric shall be considered passing only when tests on both the face side and the back side meet the respective test pass/fail criteria on all individual specimens tested. The wicking test shall be conducted on the face side on the fabric and the sorption test shall be conducted on the back side of the fabric as specified in 3.1.3.1 – 3.1.3.2.

3.1.3.1 Face side wicking test. The test specimen shall be laid flat on a glass plate with back side up (i.e., inner or skin surface when used in a garment). One (1) drop of 0.10 $\pm$ 0.01 milliliters of distilled water at 70^{o}F $\pm$ 2 ^{o}F shall be placed in the center of the test specimen using a pipette and a stopwatch/timer immediately started. The test specimen shall then be immediately turned over on the glass plate with test specimen face side up. The diameter of the wicked water area (denoted by a darkened water mark) shall be measured at a total elapsed time of 10 seconds. The specimen shall be considered passing if the diameter of the wicked water area (darkened water mark) is equal to or greater than 1-3/16 inches.

3.1.3.2 Back side sorption test. The test specimen shall be laid flat on a glass plate with back side up (i.e., inner or skin surface when used in a garment). One (1) drop of 0.10 $\pm$ 0.01 milliliters of distilled water at 70^{o}F $\pm$ 2 ^{o}F shall be placed in the center of the test specimen using a pipette and a stopwatch/timer immediately started. The water (denoted as a darkened water mark) shall be observed and the time for the water mark to disappear (water sorption, denoted as a lightened water mark approximating the shade of the basic material) shall be recorded. The specimen shall be considered passing if the water sorption (disappearance of the darkened water mark) is 10 seconds or less.

3.2 Labels. Each cap shall have an identification label, size label and a care label. The labels may be combined. The identification label shall contain the item description, contract number, fiber content information and the contractor's name. The inscription shall have a minimum font size of 10 points. The inscription legibility, label, and label attachment shall last the expected life of the cap. If available, a basic material supplier care label and hang tag may be used, except the information must be as cited in paragraph 3.2.1

3.2.1 Care Label. The care label shall include the following information:

Warm Wash
Tumble Dry Low
Or Line Dry
DO NOT USE BLEACH
DO NOT IRON

3.2.2 Bar-code label/tag. Each cap shall be individually bar-coded with a Type VI, Class 17, and Label/Tag of MIL-DTL-32075. The Label/Tag shall be located so that is completely visible on the item when it is folded and/or packaged as specified and shall cause no damage to the item.

3.2.3 Label placement. The labels shall be securely attached to the cap and positioned as follows:

(1) Care label and Identification label. At center back joining seam (±½ inch) with top edge caught in the hem cover stitching.
(2) Barcode label. Attach to top of cap at center crown.
(3) USMC label. When specified (see 7.4) the USMC label shall be placed at center back, on inside of cap as worn, with upper edge caught in hem stitching and remaining edges stitched to hem 1/16 to 3/16 inch from edge.

3.3 Toxicity. The finished cap shall not present a health hazard and shall show compatibility with prolonged, direct skin contact when tested as specified in 3.3.1. Chemicals recognized by the Environmental Protection Agency (EPA) as human carcinogens shall not be used

3.3.1 Toxicity Test. An acute dermal irritation study and a skin sensitization study shall be conducted on laboratory animals. When the results of the studies indicate the cap is not a sensitizer or irritant, a Repeat Insult Patch Test shall be performed in accordance with the Modified Draize Procedure (see 7.1.6) If the toxicity requirement (see 3.3) can be demonstrated with historical data, toxicity testing may not be required (see 7.4).

3.4 Patterns. The government shall furnish a pattern (see Table II) to maintain uniformity and consistency in manufacturing. Standard patterns provide an allowance of 3/8 inch for all joining seams. The government patterns shall be used to create the contractor's working patterns. Minor modifications are permitted to accommodate manufacturing procedures; however the design and finished measurements shall be maintained.

TABLE II. Pattern parts.

Material	Nomenclature	Cut Parts
Polyester Fleece	Cap, Synthetic Microfleece	1

3.5 Configuration. The following specifics are needed to provide uniform appearance; comfort and durability in use during field duties, and combat operations other than war. End item construction and appearance shall conform to Figure 1 and the finished dimensions listed in Table V to maintain configuration.

3.5.1 Seaming. The seams shall be consistent, exhibit a uniform appearance and conform to the ASTM D 6193 Stitch Types listed in Table III. All material edges shall not ravel.

TABLE III. Seams

Seaming Area	Seam Type	Gage	Stitch Type
Join darts and close center back seam	SSa-1	3/8 inch	504
Attach USMC label	EFa-1	1/16 to 3/16 inch from edge.	301
Hem stitching and catching labels	EFa-2	1/16 to 1/8 inch from edge	605

4. REGULATORY REQUIREMENTS. The offeror/contractor is encouraged to use recovered materials to the maximum extent practical, in accordance with 23.403 of the Federal Acquisition Regulation (FAR)

5. PRODUCT CONFORMANCE

5.1 Product conformance. The products provided shall meet the salient characteristics of this Commercial Item Description, and shall conform to the Government pattern/ producer's own drawings, specifications, standards and quality assurance practices. The Government reserves the right to require proof of such conformance.

5.2 Visual examination. All of the visual properties listed below (see 5.2.1) and any other characteristics determined to affect the form, fit or function of the item as determined by the government representative shall be classified as a defect.

5.2.1 Defects. Any hole, cut, tear, run, needle chew or weakening defect in the material; any mend or patch; any shade variation within a part or between parts; any color not as specified; any puckered, distorted, pleated, wavy, twisted, irregular or open seams; any loose stitch tension resulting in loose seams; any seam type not as specified; any raw edges; any broken or missing thread or stitches; any spot or stain; any omitted component or any component not as specified, any distorted, full, tight, or twisted components, excessive thread ends not trimmed or removed; any unpleasant odor; omitted, incorrect, illegible, labels; labels not attached as specified; bar codes omitted or not readable by scanner; illegible or omitted human-readable interpretation (HRI); bar code not visible on folded, packaged item; any damage caused by the bar code to the cap; and any dimensions and finished measurements not as specified shall be considered a defect.

5.3 Acceptance criteria. Acceptance criteria shall be as specified in the contract or purchase order.

5.5 Finished measurements. The cap shall conform to the dimensions specified (in inches) in Table IV:

TABLE IV. Cap finished measurements

	One Size Fits All	Small/Medium	Large/X-Large	Tolerance
½ Bottom Circumference 1/	11	11	11-1/4	±¼
Cap height 2/	10	10	10	±¼
Hem Width 3/	4	4	4	±¼

Measurements shall be taken as follows:

1/ Cap shall be laid flat with hem edges even and measure from folded edge to folded edge at base of cap.

2/ Measure along center back joining seam from top of cap to bottom edge of hem.

3/ Measure from bottom of cover stitch to base of hem.

6. PACKAGING

6.1 Packaging, packing and marking. Preservation, packing and marking shall be as specified in the contract or purchase order.

7. NOTES

7.1 Sources of documents

7.1.1 Copies of government documents are available online at http://assist.daps.dla.mil/quicksearch/ or http://assist.daps.mil or from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

7.1.2 AATCC Standards are available online at www.aatcc.org or from the American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709-2215.

7.1.3 ANSI/ASQ standards are available online at http://www.asq.org or from the American Society for Quality, 600 North Plankinton Avenue, Milwaukee, WI 53203.)

7.1.4 ASTM Standards are available online at www.astm.org or from ASTM INTERNATIONAL, 100 Barr harbor Drive, West Conshohocken, PA 19428-2959.

7.1.5 Federal Acquisition Regulations are available online at http://acquisition.gov/far/index.html or by contacting the Superintendent of Documents at 202-512-1800.

7.1.6 Principles and Methods of Toxicology (fourth edition), A Wallace Hayes (editor), pp 1057 - 1060, 2001 are available from Taylor and Francis, Philadelphia PA or http://www.taylorandfrancis.co.uk/.

7.2 Standard samples, patterns and drawings.

7.2.1 For standard samples and pattern drawings, address the contracting activity issuing the invitation for bids or request for proposal. Standard samples are also available at DSCP through http://warfighter.dla.mil under tab "Vendor Info" then "Specifications/Pattern Request" under "Special Instructions" provide color shade, roll number and solicitation/contract number.

7.3 Polartec ® 100 series; Micro Style 9118 or 9118M fleece material is known to meet the requirements of this document.

7.4 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents (if applicable).

a. Title, number, and date of this document.
b. Class (color) and size required (see 2).
c. Label requirement (see 3.2)
d Toxicity requirement (see 3.3)
e. Pattern for Cap (see 3.4).
f. Acceptance Criteria (see 5.2)
g. Packaging requirements (see 6.1).

7.5 Key words:
Extended Cold Weather Clothing System (ECWCS)
Headwear
Polartec® 100 Series
Polyester

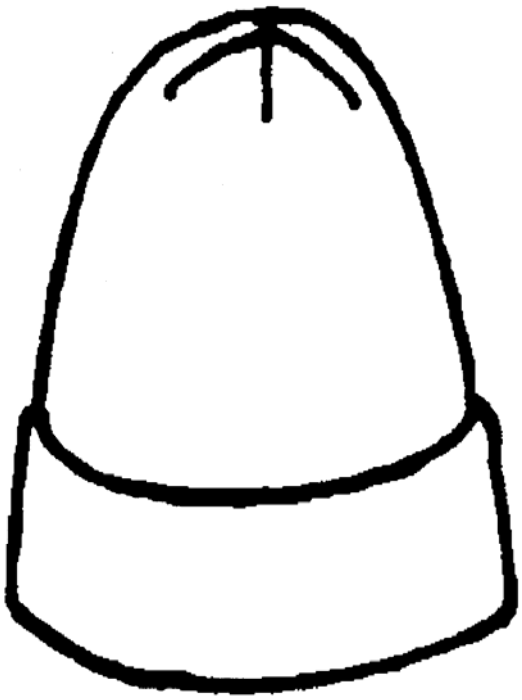

FIGURE 1. Viewed as Worn

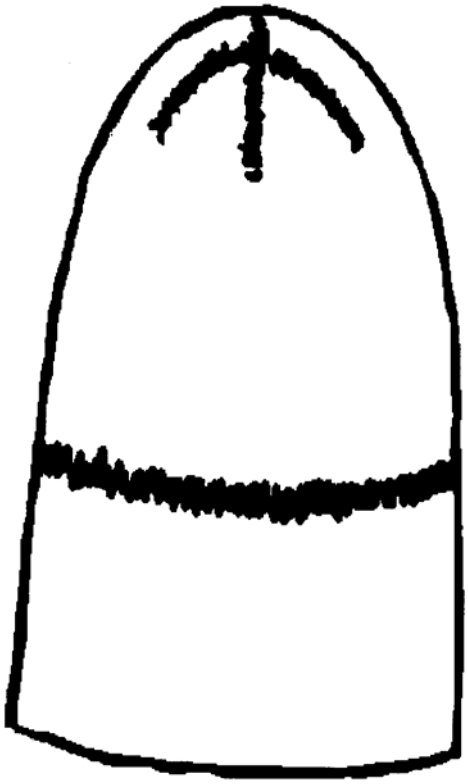

FIGURE 2. Inside View

MILITARY INTERESTS:

Custodians
Army-GL
Navy- MC
Air Force-11

Civil Agency Coordinating Activity:
GSA-FSS

Preparing Activity
DLA-CT
(Project Number 8415-2006-004)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at http://assist.daps.dla.mil/.